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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,946	08/13/2001	Joachim Ebermann	A34359 071308.0169	8757
21003	7590	04/13/2005		
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER CHANG, SUNRAY	
			ART UNIT	PAPER NUMBER
			2121	
DATE MAILED: 04/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/928,946

**Applicant(s)**

EBERMANN ET AL.

**Examiner**

Sunray Chang

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

1. This office action is in responsive to the paper filed on November 5<sup>th</sup>, 2005.
2. Claims 1 – 7 are presented for examination.

Claims 1 – 7 are rejected.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. **Claims 1 – 7 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Sudhir Pednekar et al. (U.S. Patent No. 6,385,023 and referred to as Pednekar hereinafter), in view of Minoru Namekata et al. (U.S. Patent No. 5,835,541 and referred to as Namekata hereinafter), and

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further in view of Takayuki Matsumoto et al. (U.S. Patent No. 5,559,474 and referred to as Matsumoto hereinafter).

(Pednekar as set forth above generally discloses the basic inventions.)

**4. Regarding independent claim 1,**

Pednekar teaches,

- A method for monitoring a technical system having a process variable and an associated threshold parameter value therefore which are sampled cyclically; [Col. 3, Lines 4 – 9]
- emission of a process-variable-dependent identification signal for a control program; [Abstract, and Col. 4, Lines 4 – 11]
- cyclic sampling of at least one of said process variables; [Col. 3, Lines 4 – 9]

Pednekar does not teach selecting from the group consisting of a closed-loop, open-loop and closed-loop and open-loop control program; determining a threshold value crossing time from at least two previous samples of a process variable having at least one threshold value.

Namekata teaches

- determining a threshold value crossing time from at least two previous samples of a process variable having at least one threshold value, [Col. 10, Lines 18 – 52, and Col. 12, Lines 38 – 54]; for the purpose of improving the reception characteristic.

Matsumoto teaches,

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- the group consisting of a closed-loop, open-loop and closed-loop and open-loop control program [Abstract], for the purpose of obtaining an accurate output.

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Pednekar to include "selecting from the group consisting of a closed-loop, open-loop and closed-loop and open-loop control program; determining a threshold value crossing time from at least two previous samples of a process variable having at least one threshold value", for the purpose of improving the reception characteristic and obtaining an accurate output.

**5. Regarding dependent claim 2,**

Pednekar teaches,

- A method for monitoring a technical system having a process variable and an associated threshold parameter value therefore which are sampled cyclically; [Col. 3, Lines 4 – 9]

Pednekar does not teach starting a timing mechanism with a time difference between the process variable identification and the threshold value crossing and providing the identification signal when this time difference is reached.

Namekata teaches,

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- starting a timing mechanism with a time difference between the process variable identification and the threshold value crossing, [Col. 9, Lines 41 – 65, and Col. 11, Line 55 – Col. 12, Line 10] and
- providing the identification signal when this time difference is reached, [Col. 9, Lines 41 – 65], for the purpose of improving the reception characteristic.

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Pednekar to include "starting a timing mechanism with a time difference between the process variable identification and the threshold value crossing and providing the identification signal when this time difference is reached", for the purpose of improving the reception characteristic.

**6. Regarding independent claim 3,**

Pednekar teaches,

- A method for monitoring a technical system having a process variable and an associated threshold parameter value therefore which are sampled cyclically; [Col. 3, Lines 4 – 9]

Pednekar does not teach processing a single-stage or multi-stage command sequence on the basis of one occurrence of the identification signal of the reached time difference.

Namekata teaches,

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- processing a single-stage or multi-stage command sequence on the basis of one occurrence of the identification signal of the reached time difference, for the purpose of improving the reception characteristic. [Col. 9, Lines 41 – 65]

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Pednekar to include "processing a single-stage or multi-stage command sequence on the basis of one occurrence of the identification signal of the reached time difference", for the purpose of improving the reception characteristic.

**7. Regarding independent claim 4,**

Pednekar teaches,

- A method for monitoring a technical system having a process variable and an associated threshold parameter value therefore which are sampled cyclically; [Col. 3, Lines 4 – 9]

Pednekar does not teach determining the threshold value crossing time from samples of a process variable with the aid of a mathematical approximation function.

Namekata teaches,

- determining the threshold value crossing time from samples of a process variable with the aid of a mathematical approximation function. [Col. 11, Line 55 – Col. 12, Line 10]

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Pednekar to include "determining the threshold value crossing time from samples of a process variable with the aid of a mathematical approximation function", for the purpose of improving the reception characteristic.

**8. Regarding independent claim 5,**

Pednekar teaches,

- A method for monitoring a technical system having a process variable and an associated threshold parameter value therefore which are sampled cyclically; [Col. 3, Lines 4 – 9]

Pednekar does not teach detecting characteristic values of a technical process; using the characteristic values to form a model simulation of a control path in the control program; supplying at least one manipulated variable for the technical process to the model simulation; and determining a threshold value crossing time by the model simulation.

Namekata teaches,

- detecting characteristic values of a technical process; [Col. 13, Lines 26 – 38]
- using the characteristic values to form a model simulation of a control path in the control program; [Col. 12, Line 11 – Col. 13, Line 38]
- supplying at least one manipulated variable for the technical process to the model simulation; [Col. 12, Line 11 – Col. 13, Line 38] and



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- determining a threshold value crossing time by the model simulation. [Col. 11, Line 55 – Col. 12, Line 10]

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Pednekar to include "detecting characteristic values of a technical process; using the characteristic values to form a model simulation of a control path in the control program; supplying at least one manipulated variable for the technical process to the model simulation; and determining a threshold value crossing time by the model simulation", for the purpose of improving the reception characteristic.

9. **Regarding independent claims 6 and 7,**

Pednekar teaches,

- A method for monitoring a technical system having a process variable and an associated threshold parameter value therefore which are sampled cyclically; [Col. 3, Lines 4 – 9]

Pednekar does not teach determining the threshold value crossing time in each remaining sampling cycle using updated instantaneous values of the process variable and initializing the timing mechanism with a remaining time difference in each sampling cycle which precedes the sampling cycle in which the threshold value crossing is expected, and restarting the timing mechanism with an updated time difference in the following sampling cycles, provided that the threshold value crossing has not occurred.

Namekata teaches,

- determining the threshold value crossing time in each remaining sampling cycle using updated instantaneous values of the process variable and initializing the timing mechanism with a remaining time difference in each sampling cycle which precedes the sampling cycle in which the threshold value crossing is expected, [Fig. 5, and Col. 12, Line 11 – Col. 13, Line 38] and
- restarting the timing mechanism with an updated time difference in the following sampling cycles, provided that the threshold value crossing has not occurred. [Fig. 5, and Col. 12, Line 11 – Col. 13, Line 38]

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Pednekar to include "determining the threshold value crossing time in each remaining sampling cycle using updated instantaneous values of the process variable and initializing the timing mechanism with a remaining time difference in each sampling cycle which precedes the sampling cycle in which the threshold value crossing is expected, and restarting the timing mechanism with an updated time difference in the following sampling cycles, provided that the threshold value crossing has not occurred", for the purpose of improving the reception characteristic.

**Response to Amendment**

**Claim Rejections - 35 USC § 101**

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10. Applicants' amendment over comes the former 35 USC 101 rejections, examiner has withdrawn the claim objection.

**Conclusion**


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kerry C. Glover (U.S. Patent No. 6,018,554) discloses an automatic gain control, and a sampled time control loop. Ryan E. Hirth et al. (U.S. Patent No. 6,222,876) discloses a compensation for transmission characteristics.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunray Chang whose telephone number is (571) 272-3682. The examiner can normally be reached on M-F 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-746-3506.

Sunray Chang  
Patent Examiner  
Group Art Unit 2121  
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U.S. Patent and Trademark Office

  
Anthony Knight  
Supervisory Patent Examiner  
Group 3600

April 7, 2005